



**I dati aperti cemento della scienza:  
risultati dell'indagine Bibliosan per la  
Scienza Aperta (BISA)**

Istituto Superiore di Sanità, Roma. 15 maggio 2017

**SOFTWARE E INFRASTRUTTURE IT  
PER LA GESTIONE DEGLI OPEN DATA**

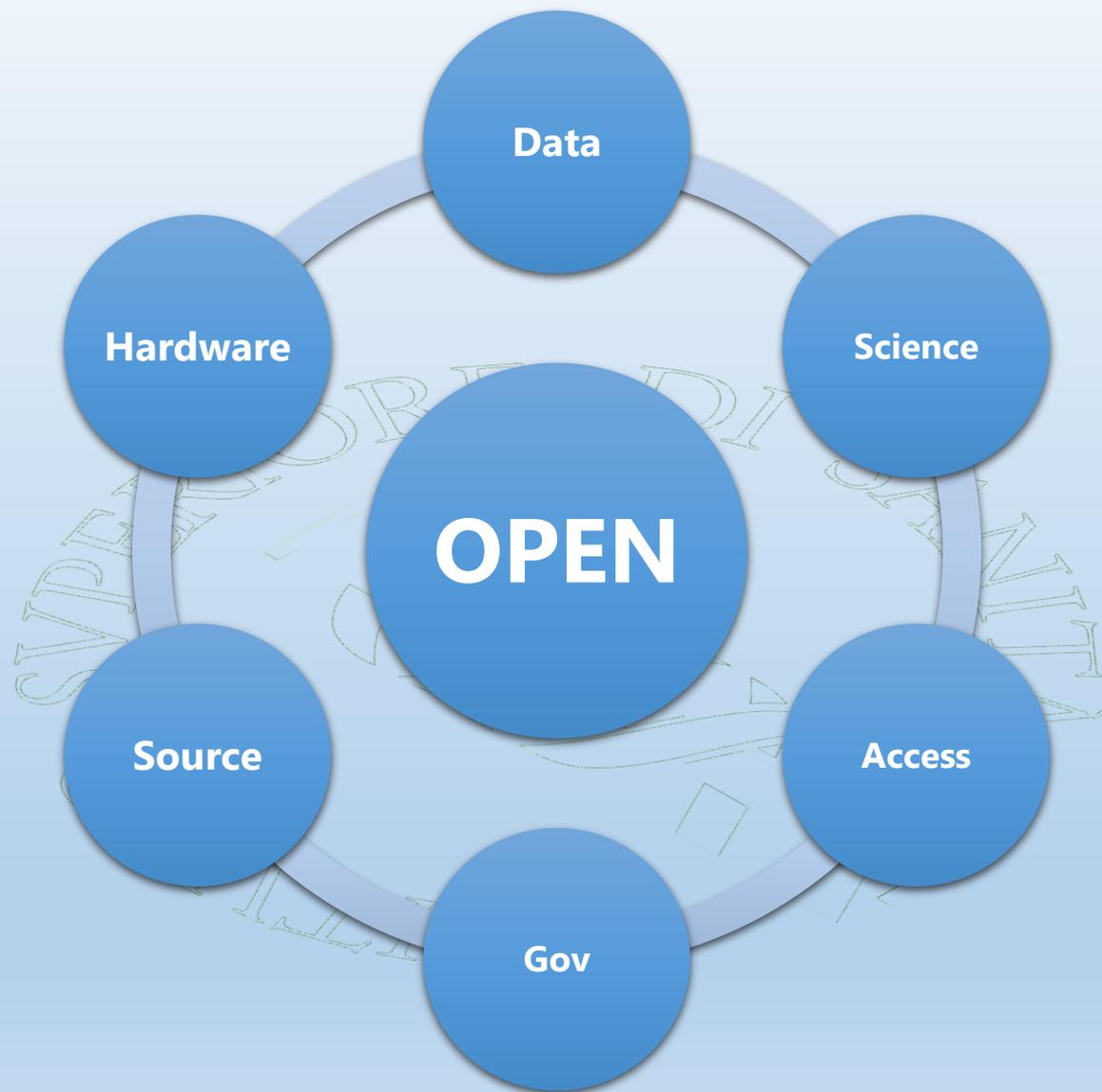
**FILIPPO SANTORO**

SERVIZIO TECNICO-SCIENTIFICO DI COORDINAMENTO E SUPPORTO ALLA RICERCA, ISS, ROMA

**CORRADO DI BENEDETTO**

SERVIZIO DI CONTROLLO DI GESTIONE INFORMATICA, ISS, ROMA

# Il concetto di *open* nell'Information Technology (IT)



# Definizione di *digital asset*

A **digital asset**, in essence, is anything that exists in a **binary format** and comes with the right to use. Data that do not possess that right are not considered assets. *Digital assets* include but are not exclusive to: **digital documents, audible content, motion picture, and other relevant digital data that are currently in circulation or are, or will be stored on digital appliances** [...] which would be able to carry digital assets; notwithstanding the proprietorship of the physical device onto which the digital asset is located

Fonte: [https://en.wikipedia.org/wiki/Digital\\_asset](https://en.wikipedia.org/wiki/Digital_asset)

# OPEN DATA MANAGEMENT

## Requisiti del software e dell'infrastruttura IT

### ❑ **INTERFACCIA WEB**

- Full Stack Architecture
- RESTful Web services

### ❑ **FLESSIBILITÀ**

- Unlimited File types
- Configurable Database & file storage
- Multi-language
- Tools/plugins

### ❑ **SEARCH ENGINE**

- Built-in search engine

### ❑ **INTEROPERABILITÀ**

- Metadata
- OAI-PMH/SWORD (v1 and v2)/OpenAIRE/Driver

### ❑ **SICUREZZA**

- Security
- Permissions
- Disaster Recovery
- Data Integrity

# OPEN DATA MANAGEMENT

## Requisiti del software e dell'infrastruttura IT (1)

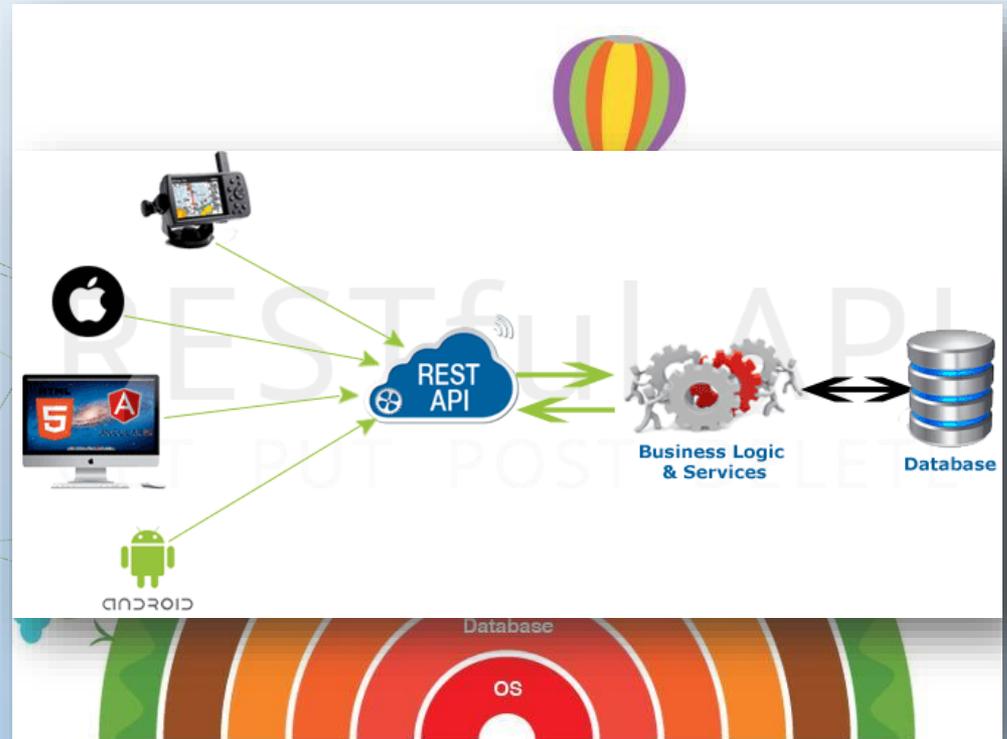
- ❑ **INTERFACCIA WEB**
  - Full Stack Architecture
  - RESTful Web services

- ❑ **FLESSIBILITÀ**
  - Unlimited File types
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  - Metadata
  - OAI-PMH/SWORD (v1 and v2)/OpenAIRE/Driver

- ❑ **SICUREZZA**
  - Security
  - Permissions
  - Disaster Recovery
  - Data Integrity



# OPEN DATA MANAGEMENT

## Requisiti del software e dell'infrastruttura IT (2)

- ❑ **INTERFACCIA WEB**
  - Full Stack Architecture
  - RESTful Web services

- ❑ **FLESSIBILITÀ**
  - Unlimited File types
  - Configurable Database & file storage
  - Multi-language
  - Tools/plugins

- ❑ **SEARCH ENGINE**
  - Built-in search engine

- ❑ **INTEROPERABILITÀ**
  - Metadata
  - OAI-PMH/SWORD (v1 and v2)/OpenAIRE/Driver

- ❑ **SICUREZZA**
  - Security
  - Permissions
  - Disaster Recovery
  - Data Integrity



# OPEN DATA MANAGEMENT

## Requisiti del software e dell'infrastruttura IT (3)

- ❑ **INTERFACCIA WEB**
  - Full Stack Architecture
  - RESTful Web services

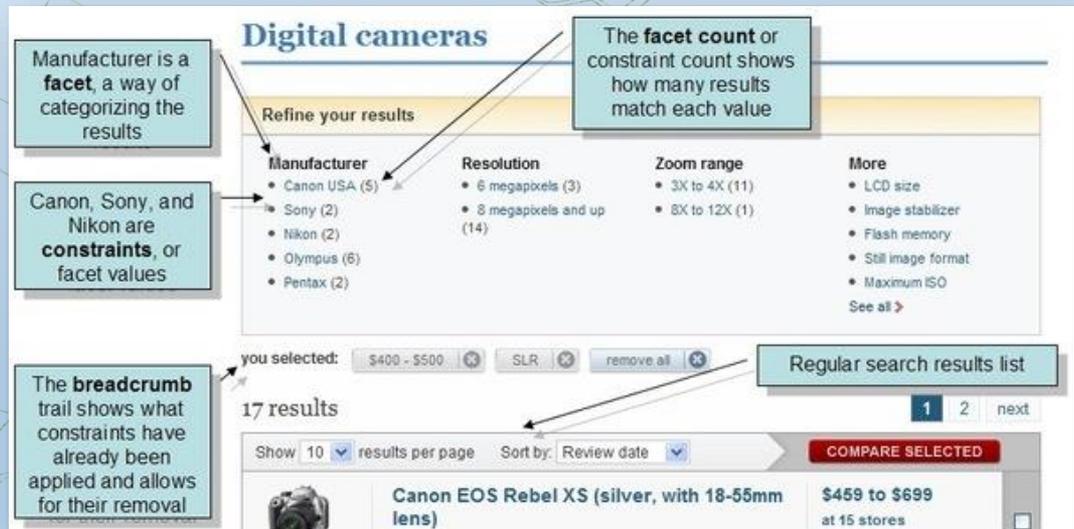
- ❑ **FLESSIBILITÀ**
  - Unlimited File types
  - Configurable Database & file storage
  - Multi-language
  - Tools/plugins

- ❑ **SEARCH ENGINE**
  - **Built-in search engine**

- ❑ **INTEROPERABILITÀ**
  - Metadata
  - OAI-PMH/SWORD (v1 and v2)/OpenAIRE/Driver

- ❑ **SICUREZZA**
  - Security
  - Permissions
  - Disaster Recovery
  - Data Integrity

# Solr



**Digital cameras**

Refine your results

**Manufacturer** (Facet)

- Canon USA (5)
- Sony (2)
- Nikon (2)
- Olympus (6)
- Pentax (2)

**Resolution** (Facet)

- 6 megapixels (3)
- 8 megapixels and up (14)

**Zoom range** (Facet)

- 3X to 4X (11)
- 8X to 12X (1)

**More**

- LCD size
- Image stabilizer
- Flash memory
- Still image format
- Maximum ISO

See all >

you selected: \$400 - \$500 (x) SLR (x) remove all (x)

**Regular search results list**

17 results

Show 10 results per page Sort by: Review date

**COMPARE SELECTED**

Canon EOS Rebel XS (silver, with 18-55mm lens) \$459 to \$699 at 15 stores

**Annotations:**

- Manufacturer is a **facet**, a way of categorizing the results
- Canon, Sony, and Nikon are **constraints**, or facet values
- The **facet count** or constraint count shows how many results match each value
- The **breadcrumb trail** shows what constraints have already been applied and allows for their removal

# OPEN DATA MANAGEMENT

## Requisiti del software e dell'infrastruttura IT (4)

### ❑ INTERFACCIA WEB

- Full Stack Architecture
- RESTful Web services

### ❑ FLESSIBILITÀ

- Unlimited File types
- Configurable Database & file storage
- Multi-language
- Tools/plugins

### ❑ SEARCH ENGINE

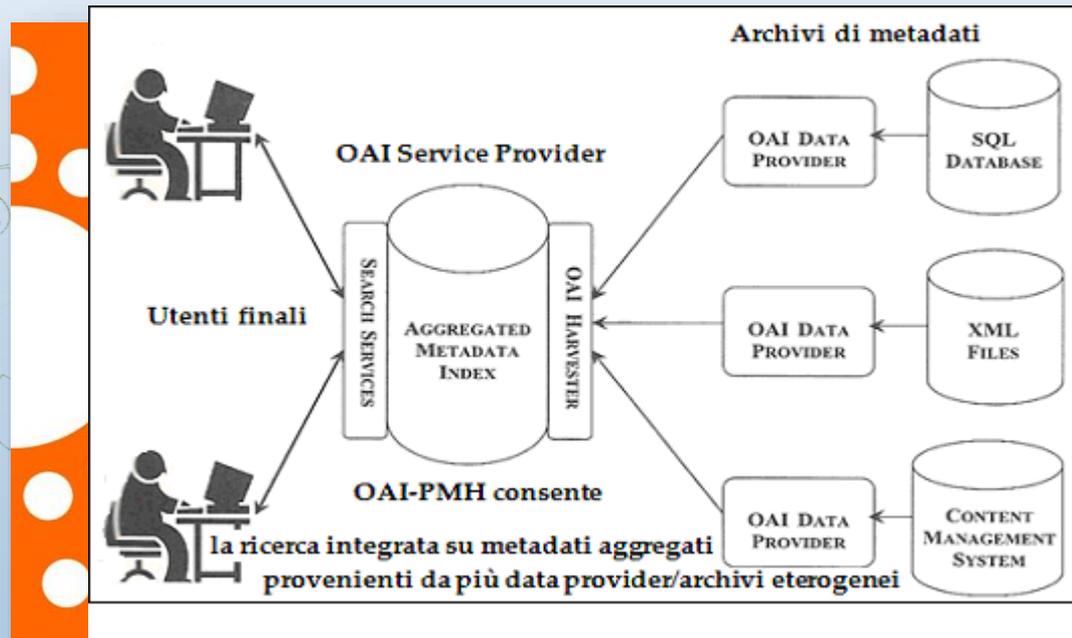
- Built-in search engine

### ❑ INTEROPERABILITÀ

- Metadata
- OAI-PMH/SWORD (v1 and v2)/OpenAIRE/Driver

### ❑ SICUREZZA

- Security
- Permissions
- Disaster Recovery
- Data Integrity



# OPEN DATA MANAGEMENT

## Requisiti del software e dell'infrastruttura IT (5)

- INTERFACCIA WEB**
  - Full Stack Architecture
  - RESTful Web services
- FLESSIBILITÀ**
  - Unlimited File types
  - Configurable Database & file storage
  - Multi-language
  - Tools/plugins
- SEARCH ENGINE**
  - Built-in search engine
- INTEROPERABILITÀ**
  - Metadata
  - OAI-PMH/SWORD (v1 and v2)/OpenAIRE/Driver
- SICUREZZA**
  - Security
  - Permissions
  - Disaster Recovery
  - Data Integrity

# LDAP

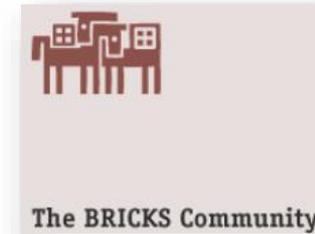
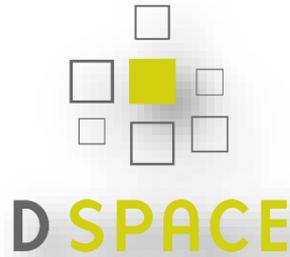
Lightweight Directory  
Access Protocol



# Shibboleth®



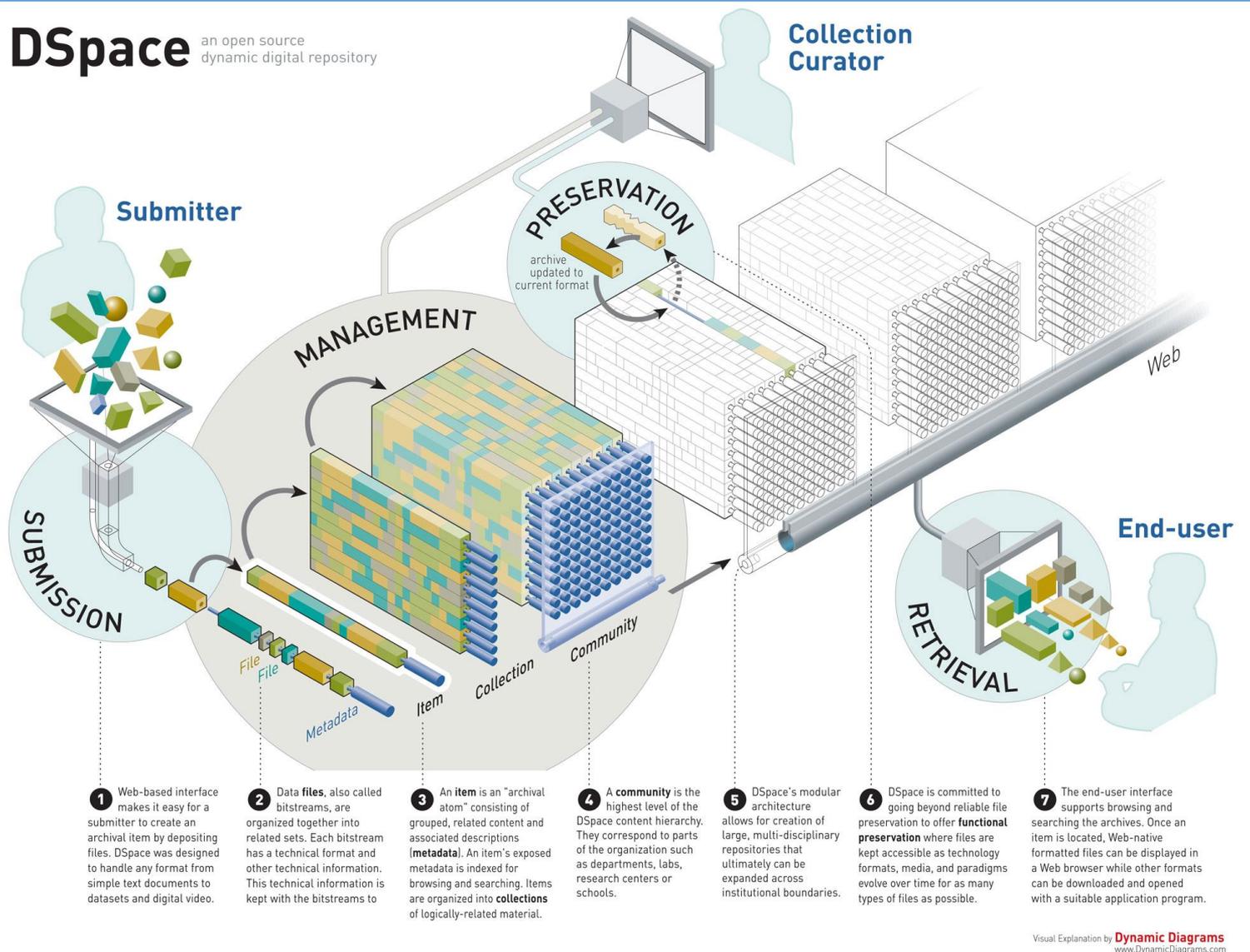
# Il panorama dei *free institutional repository software*



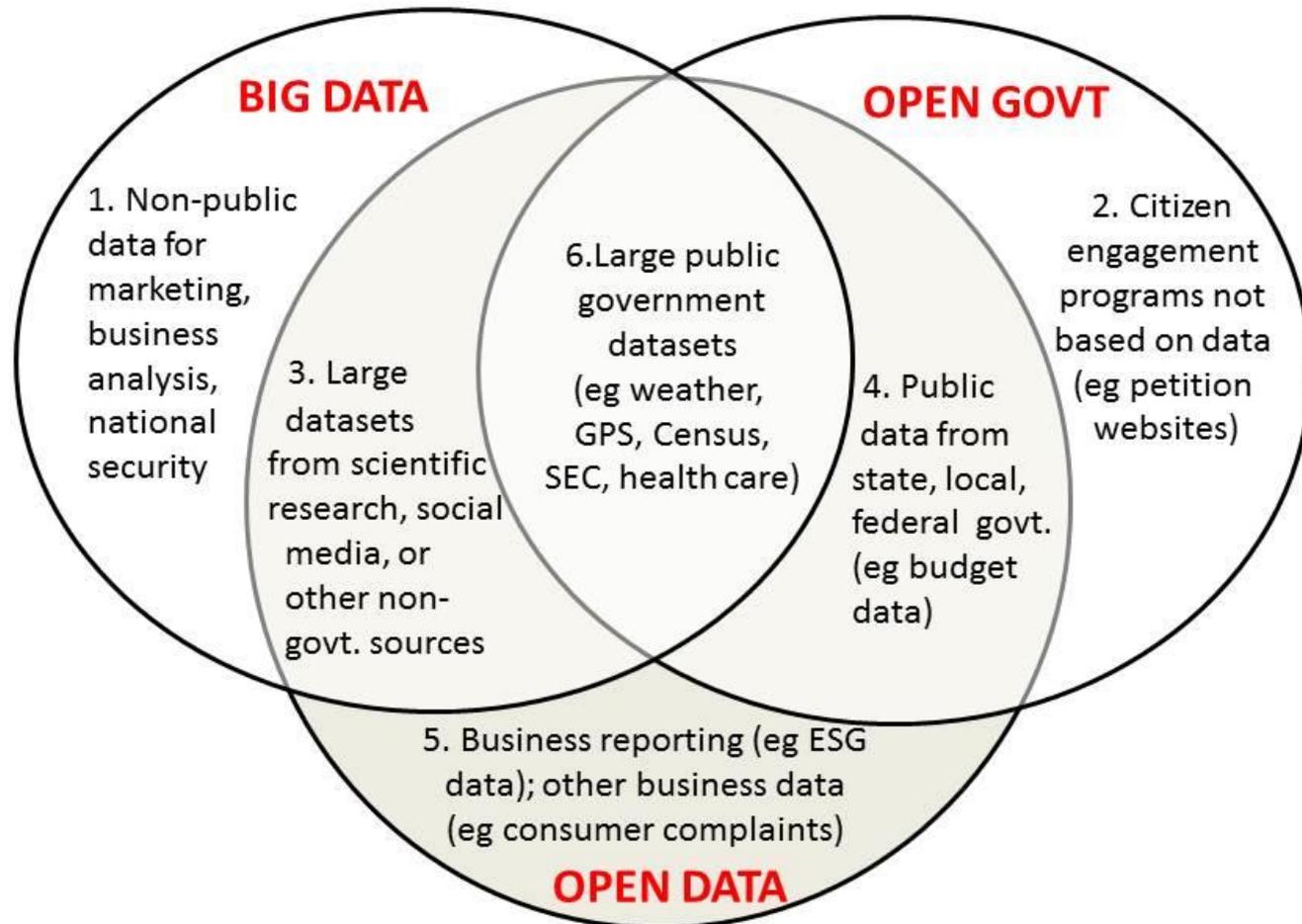
# DSpace

([www.dspace.org](http://www.dspace.org))

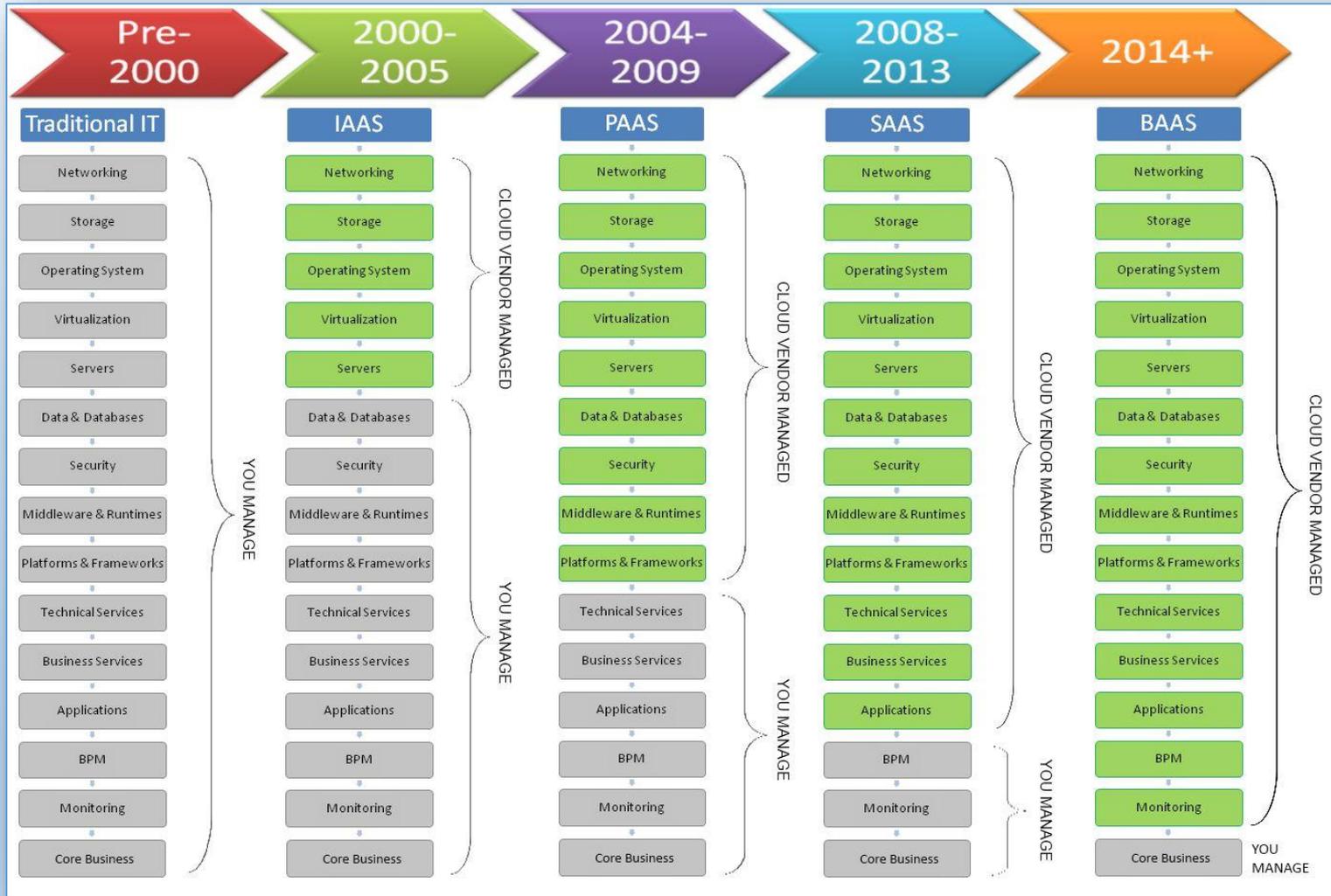
**DSpace** an open source dynamic digital repository



# Open Data & Big Data



# Evoluzione dei servizi IT



# Esempio: Microsoft Azure<sup>©</sup>

## Azure regions

Azure is generally available in 34 regions around the world, with plans announced for 4 additional regions. We place a high priority on geographic expansion to enable higher performance and to support your requirements and preferences regarding data location.

[Explore products per region](#) ▶

